



DATA STRUCTURE & MANAGEMENT

June 21—24, 1971

presented by

Continuing Professional Education
Washington University

in cooperation with

Department of Applied Mathematics and Computer Science

Dr. Ivan Flores

Dr. Flores is presently Professor of Statistics at Baruch College, City University of New York, where he conducts graduate courses in Computer Methodology. He has taught Electrical Engineering on the faculties of Stevens Institute, New York University and Polytech Institute of Brooklyn.



Dr. Flores has had over twenty years of intensive experience in the computer field spanning both hardware and software.

Among Dr. Flores' many publications are over thirty technical papers, and the following books, published by Prentice-Hall:

- DATA STRUCTURE AND MANAGEMENT, 1970
unique combination of software and hardware
- COMPUTER ORGANIZATION, 1969
first book of its kind
- COMPUTER SORTING, 1969
scholarly work — received excellent reviews
- COMPUTER DESIGN, 1967
selected by technical institutes
- COMPUTER PROGRAMMING, 1966
well-accepted — adopted by many universities
- COMPUTER SOFTWARE, 1965
used by many universities — a book club selection
- LOGIC OF COMPUTER ARITHMETIC, 1963
a reference — used in advanced design courses
- COMPUTER LOGIC, 1960
still going strong — a standard

It is recommended that some introductory review be made prior to the course. The text, **Data Structure and Management** by Dr. Flores, is suggested. Copies of this text will also be available for sale at the course for those who have had other texts in the subject, or who do not feel the need for review.

PURPOSE:

- To review the basic concepts of management information systems, their design and application.
- To enable enrollees to achieve maximum utilization of their present information system.
- To provide background information for the selection and utilization of data structure and information systems for specific applications.

THE COURSE:

This course will offer information on modern file structure and organization, and the management of such systems. An important aspect of this program will be the management of such files to create new files and to up-date and restructure existing files as new requirements and reports are required.

Data Structure and Management is recommended for programmers, system analysts and managers with some experience in programming who wish to learn about management information system. It is basically a content course for programmers and system analysts who want to be able to manipulate their files better. However, management personnel will also find that the program contains important information for those with responsibility for determining the nature of the information system or file management system that might best accomplish the specific needs of the organization.

TOPICS TO BE DISCUSSED:

1. Introduction
User Quanta . . . Computer Quanta . . . Notation . . . Lists . . . Files.
2. Posting
Searching . . . The Posting Process . . . Updating the File.
3. Linked Lists
Concepts and Symbols . . . Deleting and Appending . . . The Space Lists . . . Branch List Construction . . . Shared Lists.
4. Neighborhood Locateability
Simple Directory Techniques . . . Multiple Directory Techniques . . . Hashing . . . Overflow.
5. IO Control
The Concept . . . The Channiel . . . Cycle Stealing . . . Interrupt . . . Buffering.
6. Auxiliary Memory
Blocks and Subblocks . . . Subcommands . . . Formats.

7. Access Methods
Direct . . . Sequential . . . Partitioned . . . Indexed Sequential.
8. Fields and Keys
Fixed . . . Variable . . . Multiple Subfields . . . Subrecords . . . Search and Identify.
9. The Inverted File
Structure . . . Use . . . Creations and Maintenance.
10. Volumes and Catalogs

ENROLLMENT:

Enrollment may be made by individuals or companies. A reservation may be requested for industry, university, or government employees who require time to obtain authorization. Advance registration is required.

REGISTRATION FEE:

The pre-registration fee is \$255.00 if received prior to June 4, 1971, and \$285.00 after this date. No refunds can be made on cancellations after June 18, 1971.

MAKE CHECKS PAYABLE TO:
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HOUSING AND ARRANGEMENTS:

Comfortable, convenient, air-conditioned, room accommodations are available in nearby motels. The housing reservation form is provided for your convenience in making reservations directly with one of the motels.

The course will be held in Room 215, Cupples II, on the Washington University campus.

CONTINUING EDUCATION UNITS:

This course will be assigned Continuing Education Units as defined by the National Task Force pilot project to study feasibility and implementation of a measurement and reporting system for continuing education activities. As a participant in the pilot project, Washington University will maintain records and report on continuing education programs to the United States Office of Education. Each attendee in this course will receive a certificate of participation.

INFORMATION:

For further information concerning this program, write Box 1048, Washington University, St. Louis, Missouri 63130, or phone area code 314, 863-0100, ext. 4530.

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☐ Double occupancy, \$23.00/Day/Room

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